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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,908

10/13/2006

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

TRAN, PABLO N

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

08/31/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,908	Applicant(s) VAN DAM ET AL.	
	Examiner Pablo N. Tran	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 5, the claimed limitation, "wherein the first and second code sequences are applied to the first and second RF signals", renders the claim indefinite. Are the first code sequence applied to the first RF signal and the second code sequence applied to the second RF signal or both the first and second code sequences are applied to both RF signals. Appropriated correction required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1, 14-15, and 21 are rejected under 35 U.S.C. 102(B) as being anticipated by Leuck et al. (hereinafter "Leuck", US Pat No 6,064,665).

As per claims 1, 14-15, and 21, Leuck discloses a receiver (see fig. 7) arranged to receive at least two RF signals, wherein a first RF signal of the at least two radio frequency signals has a first center frequency and a second signal of the at least two RF radio frequency signals has a second center frequency, the receiver comprising a frequency shifter (see fig. 7/no. 92) arranged to shift the first center frequency to the second center frequency; and a combiner (see fig. 7/no. 96) arranged to combine the frequency shifted first RF signal (s.sub.3) with the second RF signal (s.sub.1) so as to obtain a combined RF signal (s4); a frequency down converter (see fig. 8) arranged to frequency down convert the combined RF signal (s4) to a combined lower frequency signal; and a demodulator (see fig. 8) arranged to demodulate the combined lower frequency signal.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 2-13 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leuck et al. (hereinafter "Leuck", US Pat No 6,064,665) in view of Kumar (US Pat No 5,825,807).

As per claim 2, Leuck does not explicitly disclose an orthogonal combiner to multiplex the RF signals. However, Kumar utilize such combiner (see col. 8/ln. 21-54). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention for Leuck to utilize such a combiner, as taught by Kumar, in order to reduce multi-path interference and error rate.

As per claim 3, the modified communication system of Leuck and Kumar further disclose the combiner comprises at least a first multiplexing switch for multiplying the first RF signal with a first code sequence and a second multiplexing switch for multiplying the second RF signal with a second code sequence (see Kumar, col. 8/ln. 21-54).

As per claim 4, the modified communication system of Leuck and Kumar further disclose the multiplexing switches are BPSK phase modulators (see Kumar, col. 5/ln. 7)..

As per claim 5, the modified communication system of Leuck and Kumar further disclose the first and second code sequences are applied to the first and second RF signals at a rate which is equal to at least twice the sample rate of the corresponding first and second RF signals (see Kumar, col. 15/ln. 5-29, col. 29/ln. 66-col. 30/ln. 55).

As per claim 6, the modified communication system of Leuck and Kumar do not utilize the Walsh code technique. However, such is well known in the art

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(see specification, 0023). Therefore, it would have been obvious at the time of invention for the modified communication system of Leuck and Kumar to utilize such coding technique to reduce self-interference, due to the exact synchronous nature of the orthogonal codes, and also enables low complexity channel estimation and simple linear multi-code channel detection, because all the Walsh channels transmit through the same propagation channel.

As per claim 7, the modified communication system of Leuck and Kumar further disclose time-multiplex the first and second RF signals (see Kumar, col. 34/ln. 40-44).

As per claim 8, the modified communication system of Leuck and Kumar further disclose adjacent RF signals (see Kumar, col. 20/ln. 53-col. 21/ln. 9).

As per claims 9 and 16-20, the modified communication system of Leuck and Kumar further disclose the receiver is arranged to receive synchronization signals for synchronizing the reception of the at least two RF signals (see Kumar, col. 13/ln. 8-11, col. 34/ln. 40-44).

As per claim 10, the modified communication system of Leuck and Kumar do not utilize ether transmission of RF signals. However, such is well known in the art. Therefore, it would have been obvious at the time of invention for the modified communication system of Leuck and Kumar to utilize such transmission protocol/format in order to easily recognized signal transmission and reception over a given distance.

As per claim 11, the modified communication system of Leuck and Kumar further disclose a bandwidth of the first RF signal is comparable to a bandwidth of the second RF signal (see Leuck, col. 3/ln. 10-25).

As per claim 12, the modified communication system of Leuck and Kumar further disclose a DVB signal (see Kumar, col. 20/ln. 53-col. 21/ln. 21).

As per claim 13, the modified communication system of Leuck and Kumar further disclose a UMTS signal (see Kumar, col. 20/ln. 53-col. 21/ln. 21).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pablo Tran whose telephone number is (571)272-7898. The examiner normal hours are 9:30 -5:00 (Monday-Friday). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (571)272-7899. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) System. Status information for Published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-directauspto.gov>. Should You have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-

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free). If you would like assistance from a USPTO Customer Service

Representative or access to the automated information system, call 800-786-

9199 (in USA or CANADA) or 571-272-1000.

August 29, 2010

/Pablo N Tran/

Primary Examiner, Art Unit 2618